

CLAIMS

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1. A wireless video surveillance system comprising:
- a) one or more video recording means for recording video images of a scene;
- 5 b) at least one interface module for converting said video images to transmittable data; and
- c) a hand-held portable monitor device comprising conversion and display means for respective conversion of said transmittable data to said video images, and display of said video images, said
- 10 portable monitor device having first wireless communication means associated therewith for receiving said transmittable data from said interface module; wherein
- said interface module comprises second wireless communication means for transmission of said transmittable data from said interface
- 15 module to said portable monitor device.
2. The wireless video surveillance system of claim 1 wherein the portable monitor device is a personal digital assistant or similar hand-held processing unit incorporating processor means, memory means and display means.
- 20 3. The wireless video surveillance system of claim 1 wherein the interface module includes input means for receiving video signals from said video recording means.
4. The wireless video surveillance system of claim 1 wherein the video recording means is a digital camera
- 25 5. The wireless video surveillance system of claim 1 wherein the video recording means is an analogue video camera.
6. The wireless video surveillance system of claim 5 wherein the interface module includes a video input means and analog to digital conversion means.
- 30 7. The wireless video surveillance system of claim 1 wherein the interface module includes processing means for converting said video images to transmittable data and one or more transmission buffers.

8. The wireless video surveillance system of claim 7 wherein the processing means is programmed with video and audio compression algorithms.
9. The wireless video surveillance system of claim 1 wherein the
5 interface module includes processing means programmed with video and audio compression algorithms and wherein the portable monitor device incorporates a processor means programmed with corresponding audio and video decompression algorithms.
10. The wireless video surveillance system of claim 1 wherein the first
10 wireless transmission means is a signal receiving means.
11. The wireless video surveillance system of claim 1 wherein the first wireless transmission means is a signal receiving and transmitting means.
12. The wireless video surveillance system of claim 1 wherein the second wireless communication means is a signal transmitting means.
13. The wireless video surveillance system of claim 1 wherein the
15 second wireless communication means is a signal receiving and transmitting means.
14. The wireless video surveillance system of claim 1 wherein the second wireless communication means is integral with said interface
20 module.
15. The wireless video surveillance system of claim 1 wherein the portable monitor device includes input means for inputting signals for transmitting to said interface module.
16. The wireless video surveillance system of claim 15 wherein said
25 first wireless communication means includes means for transmitting said signals and said second wireless communication means includes means for receiving said signals.
17. The wireless video surveillance system of any one of claims 1-16 further comprising motion detecting means for detecting motion occurring
30 within said scene.
18. The wireless video surveillance system of claim 17 wherein the motion detecting means activates a warning signal when a predetermined

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threshold amount of movement is detected by the motion detecting means.

19. The wireless video surveillance system of claim 18 wherein said warning signal is transmitted to the portable monitor device.

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A2 5 20. The wireless video surveillance system of any one of claims 17-19 further comprising selection means for selection of a video camera which is closest to the detected motion.

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A3 10 21. The wireless video surveillance system as claimed in any one of claims 1-20 further comprising video footage storage means which can be viewed on command from the portable monitor device.

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A4 22. The wireless video surveillance system as claimed in any one of claims 1-21 further comprising audio footage storage means which can be viewed on command from the portable monitor device.

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A5 15 23. The wireless video surveillance system as claimed in any one of claims 17-22 wherein the interface module further comprises alarm activation means for activation of an alarm if motion is detected by the motion detecting means.

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A6 20 24. The video surveillance system as claimed in any one of claims 1-23 further comprising audio detecting means for detecting sound which originates from within said scene.

25. The video surveillance system as claimed in claim 24 wherein the interface module further comprises alarm activation means for activation of an alarm if sound is detected by said audio detecting means.

25 26. A method of providing wireless video surveillance including the steps of:

recording a video image of a scene;

processing the recorded image to form data for wireless transmission;

transmitting the data to a hand-held portable monitor device;

processing the data to display the image on the portable monitor device,

30 wherein the step of processing the recorded image includes the further steps of compressing the image prior to transmission of the image to the portable monitor device and

decompressing the image at the portable monitor device.

27. The method of claim 26 wherein the step of compressing the image comprises the following sequential steps:

- (1) Temporal decorrelation to determine which portions of an image frame
5 have changed to enable information to be selectively updated to reproduce the changes;
- (2) Interframe coding comprising decomposition of interframe images resulting from step (1) into basic coding units and substantial quantisation of the basic coding units to eliminate unwanted information; and;
- 10 (3) Reordering of symbols or values to be coded to create a compact fit stream for each frame.

28. The method of claim 27 wherein step (1) comprises the following sequential steps:

- (a) Optional block based motion compensation;
- 15 (b) Temporal prediction; and
- (c) Replenishment.

29. The method of claim 27 wherein the reordering of symbols or values of step (3) comprises variable length based coding.

30. The method of claim 27 wherein the reordering of symbols or values
20 of step (3) comprises statistical based coding.

31. The method of claim 27 further comprising the step of activating an alarm if the temporal decorrelation of step (1) indicates that an image frame has changed.

32. The method of claim 26 further including the step of storing said
25 data for later transmission.

33. The method of claim 26 wherein the step of transmitting the data further indicates the steps of:

transmitting the data as individual frames of video data, said individual frames including key frames and predicted frames, each frame including
30 a check sum or cyclic redundancy check appended to enable a receiver at the portable monitor device to assess if the frame has been received in error;

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- if the frame is in error, discarding the frame and transmitting a status message indicating an identifier of the frame that is in error;
stopping the transmitting of predicted frames and transmitting the next available keyframe; and
- 5 after transmitting the keyframe resuming transmitting predicted frames.

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